Delaware Economic Development Office dedo.delaware.gov Innovation@work.

Method for determining gas accumulation rates

Description of Technology: Disclosed is a method for determining the accumulation rate of gases in an enclosed volume.

Patent Listing:

1. **US Patent No.** 6,598,463**,** Issued on July 29, 2003, "Method for determining gas accumulation rates"

http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO2&Sect2=HITOFF&p=1&u=%2Fnetahtml%2FPTO%2Fsearch-bool.html&r=1&f=G&l=50&co1=AND&d=PTXT&s1=6,598,463.PN.&OS=PN/6,598,463&RS=PN/6,598,463

Market Potential: An important area of commerce is the packaging of goods subject to deterioration, such as foods, cosmetics, medicines, and the like. Deterioration often results from the diffusion of gases through the packaging material. This diffusion may be in the form of the loss of carbonation in a beverage, the loss of fragrance in a cosmetic, or the accumulation of oxygen or other reactive permeants into the package causing the contents thereof to undergo undesired oxidation or other reaction. Goods packaged in plastics are particularly susceptible to diffusion-related deterioration.

Widespread research has been undertaken to identify methods for reducing the deterioration of goods packaged in plastics by interfering with the diffusive transport of various permeants through the packaging material. In order to make those advances, it is necessary to have quick, accurate, and reproducible methods for characterizing the diffusive processes which contribute to product deterioration. One particularly difficult problem is presented when the permeant of interest is present at high concentrations within the packaging material to be characterized.

The present invention provides a method for the separate, simultaneous characterization of desorption and permeation using a single specimen.

Benefits:

- Method for the separate, simultaneous characterization of desorption and permeation using a single specimen

Applications:

- Packaging of goods subject to deteriation

Contact:
Delaware Economic Development Office
Direct: (302) 577-8477**,** Fax: (302) 577-8499